UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/768,697	01/23/2001	Shlomo Shlafman	6727/11204US1	3714

7590   12/28/2007

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EXAMINER
GREENE, DANIEL LAWSON

ART UNIT	PAPER NUMBER
3694	

MAIL DATE	DELIVERY MODE
12/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	09/768,697	SHLAFMAN ET AL.
	Examiner	Art Unit
	Daniel L. Greene Jr.	3694

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *8/3/2005*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-14,17-22,25-30,33-44,47 and 48* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-14,17-22,25-30,33-44,47 and 48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   The notice of abandonment mailed 9/26/2006 is hereby vacated for reasons set forth in the 12/21/2006 interview with Mr. James Trammell.

2.   The 1/13/2006 37 CFR 1.105 requirement is considered satiated and is therefore withdrawn.

3.   An action on the merits of 1, 4-14, 17-22, 25-30, 33-35, 38-44 and 47 follows.

Claim Objections

4.   Claim 1 is objected to because of the following informalities: As a method claim, each limitation of the claim must start with an active verb. For example the second limitation of claim 1 should start with either using a computer to calculate, or calculating with a computer. The third limitation should start with recalculating the density function, based on the density function... Etc. All dependent claims that further define independent claim 1 should also utilize active method language, see for example, claim 19, etc. Appropriate correction is required.

5.   Claim 34 is objected to because of the following informalities: it appears the word "to" is missing between "adapted" and "compute" to read "adapted to compute". Appropriate correction is required.

Response to Amendment

6.   Applicant's amendments to the claims have overcome the 35 USC 101 rejection set forth in section 1 of the previous Office action mailed 5/6/2005.

7.   Applicant's amendments to the claims have also obviated the 35 USC 112

rejections set forth in section 2 of said previous Office action.

The text of those sections of Title 35, U.S. Code not included in this action can be

found in a prior Office action.

Claim Rejections - 35 USC § 103

8.   Claims 1-4, 22-26 and 35-39 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Tucker et al., The Probability Distribution of Foreign Exchange

Price Changes for the reasons set forth in section 4 of the previous office action

mailed 5/6/2005.

Tucker clearly discloses claims 1, 22 and 35 i.e. a computer-implemented

method, apparatus and software for trading in a financial derivative of an

underlying asset, comprising: determining a trend of a stochastic process, which

is predictive of a future value of the asset and a predicted variance of the future

value; responsive to the trend and the variance, numerically calculating, using a

computer, a density function indicative of a probability distribution of the value at

a first time in the future; based on the density function at the first time,

recalculating the density function by integrating a random variable representative

of the stochastic process over the density function at the first time to find the

probability distribution of the value at a second time, subsequent to the first time;

and computing at least one of an expected value of the asset and an expected

yield of the financial derivative based on the recalculated density function as a

basis for making a trading decision with regard to the derivative of the asset

based on the density function.

Allowable Subject Matter

9.   Claim 5 is objected to as being dependent upon a rejected base claim, but would

be allowable if rewritten in independent form including all of the limitations of the base

claim and any intervening claims. Claim 5 would also need to have the actual delta

functions/equations written into the claim language to overcome the prior art.

10.   Claims 22 and 35 which mirror the method of claim 1 as apparatus and software

respectively would also need to have the limitations from claims 4 and 5 modified and

added to them to make them allowable.

11.   The following is a statement of reasons for the indication of allowable subject

matter: None of the prior art of record discloses or makes obvious the use of the

combination of elements and equations set forth in claims 5, 4 and 1 including but not

limited to a convex superposition of the specific mutually translated delta functions

disclosed in for example, page 13 of the specification.

12.   This statement is not intended to necessarily state all the reasons for allowance

or all the details why the claims are allowed and has not been written to specifically or

impliedly state that all the reasons for allowance are set forth (MPEP 1302.14).

Conclusion

13.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

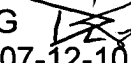than SIX MONTHS from the mailing date of this final action.

14.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Daniel L. Greene Jr. whose telephone number is (571)

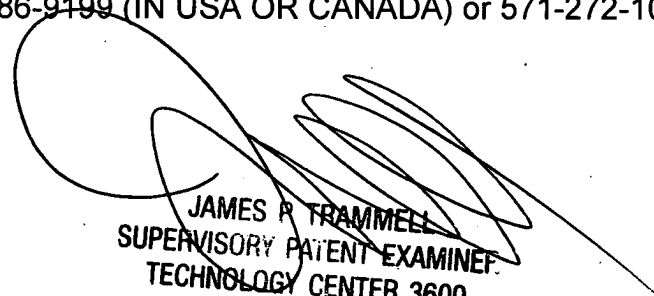272-6876. The examiner can normally be reached on Mon-Thur.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, James P. Trammell can be reached on (571) 272-6712. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

15.   Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DIG
2007-12-10

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